

Appln No. 10/505,182
Amdt date February 16, 2007
Reply to Office action of September 20, 2006

REMARKS/ARGUMENTS

The above amendments and these remarks are responsive to the Office action mailed on September 20, 2006. Claims 1, 3, 5, 10, 12, 13, 18, 23, 24 and 26-30 have been amended. Claims 2 and 25 have been cancelled. Claim 35 has been added and is directed to subject matter disclosed in the application as originally filed. No new matter has been added. Claims 1, 3-24 and 26-35 are now pending in this application. Reconsideration on the basis of the above amendments and remarks below is kindly requested.

The Examiner objected to the drawings under 37 CFR §1.83(a) as not showing every feature of the invention specified in the claims. According to the Examiner, the sine and cosine signals of claim 4 must be shown or the features must be cancelled from the claims. Applicant respectfully disagrees with this objection. Claim 4 refers to a sine and cosine signal per revolution of the rotating shutter. Signals are not features which are visible. Furthermore, the application as originally filed, on page 15, line 4, it is stated that "FIG. 5 shows a plan view of a graduated plate 70c in which next to a reference mark 702 and an incremental track 701 there are two tracks 707, 708 arranged radially off-set to the incremental track 701 from which a sine and cosine signal is obtained." Consequently, FIG. 5 does disclose from where the sine and cosine signals are obtained. Consequently, the drawings do show every feature of the invention as specified in claim 4.

The Examiner objected to claims 1, 2, 5, 10, 12, 13, 25 and 26. Claims 2 and 25 have been cancelled. Claims 1, 5, 10, 12, 13 and 26 have been amended to overcome these objections.

The Examiner objected to claim 18 as being in improper form. Claim 18 has also been amended to overcome this objection.

The Examiner objected to claims 5 and 23-30 under 35 U.S.C. §112, second paragraph, as being indefinite. Claims 5 and 23 have been amended to overcome this rejection.

The Examiner rejected claims 1, 7, 9-13, 19, 20, 22 and 31-34 under 35 U.S.C. §102(b) as being anticipated by Dang et al., U.S. Patent No. 5,850,277. The Examiner also rejected claims 6, 8, 14-17, 21-24, 26 and 28 under 35 U.S.C. §103(a) as being unpatentable over Dang et

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al. in view of Ishizuka et al., U.S. Patent No. 5,129,725. The Examiner objected to claims 2-4 but stated that these claims would be allowable if rewritten in independent form including all the limitations of their base claim and any intervening claims. Claim 2 was dependent from claim 1. Claim 1 has been amended to include the limitations of claim 2 and for clarity. Consequently, Applicant submits that claim 1 is now in condition for allowance. Claims 3-12 are directly or indirectly dependent from claim 1. As such, Applicant submits that claims 3-12 are also in condition for allowance as being dependent from an allowable base claim and for the additional limitations they contain therein.

Claim 13 as amended requires "a second sensor coupled to the shutter adjustment vane for sensing an absolute position of the shutter adjustment vane and emitting a shutter adjustment vane position signal with a resolution of n steps during one revolution of the rotatable shutter; and a position counter receiving the shutter vane and the shutter adjustment vane position signals; said position counter ascertaining the difference between the shutter vane position signal and the shutter adjustment vane position signal from the equation $\alpha = [P_{BF} - P_{VF}] * 360^\circ / n$ wherein P_{BF} is the position of the shutter vane and P_{VF} is the position of the shutter adjustment vane, wherein when the value of angle α is less than 0° the value is increased by 360° as long as the resulting value is greater than or equal to 0° or when the value of angle α is greater than or equal to 360° the value is reduced by 360° as long as the resulting value is less than 360° ." The Examiner has already acknowledged that Dang et al., nor Ishizuka et al., alone or in combination, do not disclose or render obvious detection of an absolute position of a shutter vane and absolute position of a shutter adjustment vane with a resolution of n steps during one revolution of a rotatable shutter wherein when a value of the opening angle α is less than 0° , the value is increased by 360° as long as the resulting value is greater than or equal to 0° , or when the value of angle α is greater than or equal to 360° , the value is reduced by 360° as long as the resulting value is less than 360° . Consequently, Applicant submits that claim 13 is not anticipated or rendered obvious by Dang et al. or Ishizuka et al., either alone or in combination. Claims 14-24 and 26-34 are all directly or indirectly dependent from claim 13. As such, Applicant submits that claims 14-24 and 26-34 are also in condition for allowance over Dang et al. and Ishizuka et al. as

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being dependent from a claim that is allowable over Dang et al. and Ishizuka et al. and for the additional limitations that these claims contain therein.

Claim 35 has been added and is a rewrite of claim 4 in independent form including all the limitations of its independent claim 1. Consequently, claim 35 is also now in condition for allowance.

Applicant believes that the Examiner's stated reasons for allowance in paragraph 12 of the Office action mailed on September 20, 2006 are unnecessary. The Applicant does not necessarily agree with each statement in the Reasons for Allowance. While Applicant agrees that the claims are allowable, Applicant does not acquiesce with each statement in the Reasons for Allowance that patentability requires each stated feature exactly as expressed by the Examiner, nor that each stated feature is required for patentability.

The rejections and objections to all claims pending in this application are believed to have been overcome and this application is now believed to be in condition for allowance. Should the Examiner have any remaining questions or concerns about the allowability of this application, the Examiner is kindly requested to call the undersigned attorney to discuss them.

Respectfully submitted,
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